Protecting the Reef Starts with the Right Protection

Andrade, Ku'ualoha (School: Waipahu High School)
Nishizawa, Riki (School: Waipahu High School)
Cabato, Dean (School: Waipahu High School)

The role of oxybenzone in our ocean is bleaching the coral reef. The purpose of this experiment was to determine the effectiveness of using a native plant, Naupaka Kahakai, as an active ingredient in a homemade sunscreen compared to a sunscreen containing oxybenzone. The experiment consisted of two formulas, one containing only naupaka infused coconut oil and the other including naupaka infused coconut oil and non-nano zinc oxide. The infused coconut oil was left sitting for two weeks and then mixed with other natural ingredients. Both homemade formulas and the oxybenzone formula were tested on the effectiveness of blocking out UV rays. Each formula was tested three times at 1:00PM, 2:00PM, and 3:00PM. The data collected showed that the effectiveness of the naupaka kahakai formula were less effective than the formula that contained both naupaka kahakai and non-nano zinc oxide. However, the formula that contained both ingredients were just as effective as sunscreen as the formula that contained oxybenzone. According to these results, the naupaka kahakai and non-nano zinc oxide may be used as active ingredients in a sunscreen rather than oxybenzone because it is just as effective and does not bleach the coral reefs.

Awards Won: